

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A double-stranded RNA (ds-RNA) expression vector that comprises the following sequences (a) to (c):

(a) the following nucleotide sequence (a-1) or (a-2):

(a-1) a nucleotide sequence encoding all or a part of the target gene; or

(a-2) a nucleotide sequence encoding DNA that hybridizes under stringent conditions to DNA consisting of a sequence complementary to the nucleotide sequence (a-1);

(b) a nucleotide sequence complementary to the nucleotide sequence (a) and an inverted repeat thereof; and

(c) a sequence encoding a loop region and connecting the nucleotide sequence (a) to the nucleotide sequence (b),

wherein the sequences are transcribed into RNA and thereby forming ds-RNA having a stem-loop structure.

2. (Original) The ds-RNA expression vector according to claim 1,
which further comprises a polymerase II promoter.

3. (Original) The ds-RNA expression vector according to claim 1,
which further comprises a developmental-stage-specific promoter.

4. (Currently Amended) The ds-RNA expression vector according to
claim 2 or 3, wherein the polymerase II promoter or developmental-stage-
specific promoter is a cytomegalovirus (CMV) early gene promoter.

5. (Currently Amended) The ds-RNA expression vector according to
claim 1 ~~any one of claims 1 to 4~~, which further comprises a sequence that
autocatalytically cleaves RNA located upstream of the nucleotide
sequences (a) to (c).

6. (Original) The ds-RNA expression vector according to claim 5,
wherein the sequence that autocatalytically cleaves RNA is a ribozyme
site.

7. (Currently Amended) The ds-RNA expression vector according to
claim 1 ~~any one of claims 1 to 5~~, which further comprises a sequence that
pauses RNA polymerase located downstream of the nucleotide sequences
(a) to (c).

8. (Original) The ds-RNA expression vector according to claim 7, wherein the sequence that pauses RNA polymerase is a sequence of the MAZ domain.

9. (Currently Amended) The ds-RNA expression vector according to claim 1 ~~any one of claims 1 to 8~~, wherein the nucleotide sequence (c) is as shown in SEQ ID NO: 2, 5, or 6.

10. (Currently Amended) The ds-RNA expression vector according to claim 1 ~~to any one of claims 1 to 9~~, wherein the target gene is a disease-associated gene.

11. (Currently Amended) The ds-RNA expression vector according to claim 1 ~~any one of claims 1 to 9~~, wherein the target gene is the Ski gene.

12. (Original) The ds-RNA expression vector according to claim 11, wherein a part of the target gene is a 540 bp 5'-region of the Ski gene.

13. (Original) A target gene-knockdown animal, in which a ds-RNA for the target gene is expressed.

14. (Original) The animal according to claim 13, in which the ds-RNA for the target gene is tissue-specifically expressed.

15. (Currently Amended) The animal according to claim 13 or 14, which is a transgenic animal having a ds-RNA expression vector introduced therein and expressing ds-RNA for the target gene, or progeny thereof.

16. (Currently Amended) The animal according to claim 15, wherein the ds-RNA expression vector ~~is any one of those according to claims 1 to 12~~ comprises the following sequences (a) to (c):

(a) the following nucleotide sequence (a-1) or (a-2):

(a-1) a nucleotide sequence encoding all or a part of the target gene; or

(a-2) a nucleotide sequence encoding DNA that hybridizes under stringent conditions to DNA consisting of a sequence complementary to the nucleotide sequence (a-1);

(b) a nucleotide sequence complementary to the nucleotide sequence (a) and an inverted repeat thereof; and

(c) a sequence encoding a loop region and connecting the nucleotide sequence (a) to the nucleotide sequence (b),

wherein the sequences are transcribed into RNA and thereby forming ds-RNA having a stem-loop structure.

17. (Currently Amended) The animal according to claim 13 any one-
~~of claims 13 to 16~~, wherein the target gene is a disease-associated gene,
and the animal is an animal model for disease.

18. (Original) The animal according to claim 17, wherein the target
gene is the Ski gene, and the disease is selected from the group consisting
of neural tube closure defect, malformation of the iris, and hemorrhage in
the head.

19. (Currently Amended) The animal according to claim 13 any one-
~~of claims 13 to 18~~, wherein the animal is a mouse.

20. (Original) A method for producing a target gene-knockdown
animal, wherein a ds-RNA expression vector capable of expressing ds-
RNA for the target gene is introduced to form ds-RNA for the target gene.

21. (Currently Amended) The method according to claim 20,
wherein the ds-RNA expression vector ~~is any one of those according to~~
~~claims 1 to 12~~ comprises the following sequences (a) to (c):

(a) the following nucleotide sequence (a-1) or (a-2):
(a-1) a nucleotide sequence encoding all or a part of the target
gene; or

(a-2) a nucleotide sequence encoding DNA that hybridizes under stringent conditions to DNA consisting of a sequence complementary to the nucleotide sequence (a-1);

(b) a nucleotide sequence complementary to the nucleotide sequence (a) and an inverted repeat thereof; and

(c) a sequence encoding a loop region and connecting the nucleotide sequence (a) to the nucleotide sequence (b),

wherein the sequences are transcribed into RNA and thereby forming ds-RNA having a stem-loop structure.

22. (Currently Amended) The method according to claim 20 or 21, wherein the target gene is a disease-associated gene, and the animal is an animal model for disease.

23. (Original) The method according to claim 22, wherein the target gene is the Ski gene, and the disease is selected from the group consisting of neural tube closure defect, malformation of the iris, and hemorrhage in the head.

24. (Currently Amended) The method according to claim 20 any one of claims 20 to 23, wherein the animal is a mouse.

25. (Currently Amended) An animal cell having the ds-RNA expression vectors according to claim 1 ~~any one of claims 1 to 12~~ introduced therein.